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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Paul Hastings Janofsky & Walker LLP
3579 Valley Centre Drive
San Diego, CA 92130

EXAMINER	
SERRAO, RANODHI N	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

6

Office Action Summary	Application No.	Applicant(s)	
	10/735,590	JONES ET AL.	
	Examiner	**Art Unit**	
	Ranodhi Serrao	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-23,25-41,44-56 and 93-112* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 5-23, 25-41, 44-56, and 93-112* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-3, 5-23, 25-41, 44-56, and 93-112 have been considered but are moot in view of the new ground(s) of rejection.

2. The applicant argued in substance the newly added limitations of independent claims 1, 21, 41, and 112 and the previously presented dependent claims 93, 95-96 and 102. However, the new grounds teach these and the added features. See rejections below.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 97-100, 103-105, and 109-111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salesky et al. (2005/0080850) and Marshak et al. (2003/0093597).

5. As per claim 1, Salesky et al. teaches a source device in communication with a plurality of destination devices in a collaborative communication session, each destination device in communication with the source device via an associated communication connections such that data in the source device can be shared with each destination device in a timely manner (see Salesky et al., ¶ 6-10), the source device comprising: a cluster manager configured to: determine connection characteristics for each of the plurality of destination devices and associated

communication connections (see Salesky et al., ¶ 128), and assign each of the communication connections into one of the created performance clusters based on performance similarities of the determined connection characteristics of the destination devices and associated communication connections assigned to each performance cluster (see Salesky et al., ¶ 135-138); a source data buffer containing the data to be shared with each of the plurality of destination devices (see Salesky et al., ¶ 98-99); and a plurality of synchronization mechanisms coupled with the source data buffer (see Salesky et al., ¶ 131), each of the plurality of synchronization mechanisms corresponding to one of the performance clusters (see Salesky et al., ¶ 139), wherein said synchronization mechanism is coupled with the source data buffer thereby synchronizing for each performance cluster the data sent to the destination devices associated with communication connections assigned to said performance cluster (see Salesky et al., ¶ 150). But fails to teach dynamically create one or more performance clusters based on the determined connection characteristics. However, Marshak et al. teaches dynamically create one or more performance clusters based on the determined connection characteristics (see Marshak et al., ¶ 75). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Salesky et al. to dynamically create one or more performance clusters based on the determined connection characteristics in order to dynamically modify a communication path between a first group of devices in a first data storage system and a second group of devices in a second data storage system (see Marshak et al., ¶ 10).

6. Claims 21, 95-96, and 112 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salesky et al. and Rooney (6,519,660).

7. As per claim 21, Salesky et al. teaches a network communication system for facilitating data synchronization in a collaborative web session (see Salesky et al., ¶ 6), the system comprising: a source device configured to communicate with a plurality of destination devices, each via one of a plurality of communication connections (see Salesky et al., ¶ 150), wherein each destination device has a destination synchronization mechanism and a destination data buffer (see Salesky et al., ¶ 134 and ¶ 141), the source device comprising: a cluster manager configured to determine performance similarities for the plurality of communication connections (see Salesky et al., ¶ 128) and to assign each of the plurality of communication connections into one of pre-defined performance clusters based on the determined performance similarities (see Salesky et al., ¶ 135-138); a source data buffer containing data to be shared with each destination data buffer of each of the plurality of the destination devices (see Salesky et al., ¶ 98-99); and a plurality of source synchronization mechanisms coupled with the source data buffer, and further coupled with the plurality of communication connections, each of the plurality of source synchronization mechanism corresponding to one of the performance clusters (see Salesky et al., ¶ 134). But fails to teach wherein the cluster manager is further configured to dynamically create performance clusters as system requirements dictate. However, Rooney teaches wherein the cluster manager is further configured to dynamically create performance clusters as system requirements dictate (see Rooney, col. 5, line 56-col. 6, line 31). It would have been obvious to one

having ordinary skill in the art at the time of the invention to modify Salesky et al. to wherein the cluster manager is further configured to dynamically create performance clusters as system requirements dictate in order to enable the dynamic adjustment of the allocation of resources of a computing environment to balance the workload of that environment (see Rooney, col. 3, lines 55-60).

8. As per claims 95 and 96, the above-mentioned motivation of claim 21 applies fully in order to combine Salesky et al. and Rooney.

9. As per claim 95, Salesky et al. and Rooeny teach the mentioned limitations of claims 1 and 93 above but fails to teach a source device, wherein the cluster manager is further configured to increase the number of performance clusters if the destination device service priority is higher than the source device resource priority, and decrease the number of performance clusters if the destination device service priority is lower than the source device resource priority (see Rooney, col. 7, lines 19-49).

10. As per claim 96, Salesky et al. and Rooney teach a source device, wherein each of the performance clusters is pre-defined to be associated with a subset of communication connections having similar performance capabilities (see Rooney, col. 6, lines 5-30).

11. As per claim 112, Salesky et al. teaches a source device in communication with a plurality of destination devices in a collaborative communication session, each destination device in communication with the source device via an associated communication connections such that data in the source device can be shared with each destination device in a timely manner (see Salesky et al., ¶ 6-10), a cluster

manager configured to determine connection characteristics for each of the plurality of destination devices and associated communication connections (see Salesky et al., ¶ 128), and further configured to assign each of the communication connections into one of the created performance clusters based on performance similarities of the determined connection characteristics of the destination devices and associated communication connections assigned to each performance cluster (see Salesky et al., ¶ 135-138); a source data buffer containing the data to be shared with each of the plurality of destination devices (see Salesky et al., ¶ 98-99); a plurality of synchronization mechanisms coupled with the source data buffer (see Salesky et al., ¶ 131), each of the plurality of synchronization mechanisms corresponding to one of the performance clusters (see Salesky et al., ¶ 139), wherein said synchronization mechanism is coupled with the source data buffer thereby synchronizing for each performance cluster the data sent to the destination devices associated with communication connections assigned to said performance cluster (see Salesky et al., ¶ 150). But fails to teach the cluster manager further configured to vary the number of performance clusters based on a service priority level of the destination device and a resource priority level of the source device. However, Rooney teaches the cluster manager further configured to vary the number of performance clusters based on a service priority level of the destination device and a resource priority level of the source device (see Rooney, col. 7, lines 33-67). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Salesky et al. to the cluster manager further configured to vary the number of performance clusters based on a

service priority level of the destination device and a resource priority level of the source device in order to enable the dynamic adjustment of the allocation of resources of a computing environment to balance the workload of that environment (see Rooney, col. 3, lines 55-60).

12. As per claim 97, Salesky et al. teaches a source device, wherein the data in the source data buffer comprises audio and video data in the collaborative communication session (¶ 67).

13. As per claim 98, Salesky et al. teaches a source device, wherein the data in the source data buffer comprises image data shared in the collaborative communication session (¶ 69).

14. As per claim 99, Salesky et al. teaches a source device, wherein the image data represents a region displayed on a computer screen, wherein said region and said shared image data are updated at least once while being shared (¶ 70).

15. As per claim 100, Salesky et al. teaches a source device, wherein the sharing of data in the source data buffer with the destination devices provides a display sharing function in the collaborative communication session (¶ 60).

16. As per claim 103, Salesky et al. teaches a network communication system, further comprising a remote source device, the remote source device configured to communicate with the plurality of destination devices via the source device (¶ 55).

17. As per claim 104, Salesky et al. teaches a network communication system, wherein the remote source device comprises a remote source data buffer and a remote

synchronization mechanism coupled with the remote source data buffer, the remote source data buffer containing data to be shared with the source buffer (¶ 69).

18. As per claim 105, Salesky et al. teaches a network communication system, wherein the source device further comprises an intermediate synchronization mechanism in communication with the remote synchronization mechanism via a remote communication connection (¶ 69).

19. As per claim 109, Salesky et al. teaches a network communication system, wherein the data comprises application data shared in the collaborative communication session (¶ 76).

20. As per claim 110, Salesky et al. teaches a network communication system, wherein the data comprises image data shared in the collaborative communication session, wherein the image data represents a region displayed in a computer screen (¶ 81).

21. As per claim 111, Salesky et al. teaches a network communication system, wherein said region and said image data are updated at least once while being shared (¶ 82).

22. Claims 2, 3, 5-6, and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salesky et al. and Marshak et al. as applied to claim 1 above, and further in view of Gillett, Jr. et al. (6,295,585) (referred to hereinafter as Gillett).

23. As per claim 2, Salesky et al. and Marshak et al. teach the mentioned limitations of claim 1 above but fails to teach a source device, wherein the cluster manager is

further configured to assign a synchronization mechanism to each of the performance clusters. However, Gillett teaches a source device, wherein the cluster manager is further configured to assign a synchronization mechanism to each of the performance clusters (see Gillett, col. 10, lines 14-29). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Salesky et al. and Marshak et al. to a source device, wherein the cluster manager is further configured to assign a synchronization mechanism to each of the performance clusters in order to provide an interconnect for parallel computing systems having high performance and recoverable communication in the presence of errors (see Gillett, Jr. et al., col. 2, lines 11-13).

24. As per claims 3, 5-6, and 10-11, the above-mentioned motivation of claim 2 applies fully in order to combine Salesky et al., Marshak et al., and Gillett.

25. As per claim 3, Salesky et al., Marshak et al., and Gillett teach a source device, wherein each of the plurality of synchronization mechanisms is configured to provide computations and protocols needed to communicate the data from the source device to each destination device over the plurality of communication connections (see Gillett, col. 15, lines 18-39).

26. As per claim 5, Salesky et al., Marshak et al., and Gillett teach a source device, wherein the performance clusters include a high performance cluster (see Gillett, col. 11, lines 61-65).

27. As per claim 6, Salesky et al., Marshak et al., and Gillett teach a source device, wherein the performance clusters include an intermediate performance cluster (see Gillett, col. 14, lines 56-67).

28. As per claim 10, Salesky et al., Marshak et al., and Gillett teach a source device, wherein at least one of the performance similarities is determined based on the connection security of each of the plurality of communication connections (see Gillett, col. 15, lines 18-39).

29. As per claim 11, Salesky et al., Marshak et al., and Gillett teach a source device, wherein at least one of the performance similarities is determined based on the error rate of each of the plurality of communication connections (see Gillett, col. 6, lines 33-45).

30. Claims 7-9, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salesky et al. and Marshak et al. as applied to claim 1 above, and further in view of Wipfel et al. (6,151,688) (referred to hereinafter as Wipfel).

31. As per claim 7, Salesky et al. and Marshak et al. teach the mentioned limitations of claim 1 above but fail to teach a network communication system, wherein some of the plurality of destination devices use low bandwidth connections with the source device, and wherein some of the performance clusters are low performance clusters configured to service the low performance connections. However, Wipfel teaches a network communication system, wherein some of the plurality of destination devices use low bandwidth connections with the source device, and wherein some of the performance clusters are low performance clusters configured to service the low performance connections (see Wipfel, col. 7, lines 19-29). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Salesky et al. and Marshak

et al. to a network communication system, wherein some of the plurality of destination devices use low bandwidth connections with the source device, and wherein some of the performance clusters are low performance clusters configured to service the low performance connections in order to provide a major advantage of clusters which is their support for heterogeneous nodes (see Wipfel, col. 1, lines 47-54).

32. As per claims 8, 9, 12, and 13, the above-mentioned motivation of claim 7 applies fully in order to combine Salesky et al., Marshak et al., and Wipfel.

33. As per claim 8, Salesky et al., Marshak et al., and Wipfel teach a source device, wherein at least one of the performance similarities for the plurality of communication connections is determined based on the bandwidth capability of each of the plurality of communication connections (see Wipfel, col. 5, lines 36-56).

34. As per claim 9, Salesky et al., Marshak et al., and Wipfel teach a source device, wherein at least one of the performance similarities for the plurality of communication connections is determined based on the latency of each of the plurality of communication connections (see Wipfel, col. 5, lines 36-56).

35. As per claim 12, Salesky et al., Marshak et al., and Wipfel teach a source device, wherein the cluster manager is further configured to detect a change in connection characteristics for any of the plurality of communication connections and to assign the communication connection to one of the performance clusters based on the changed connection characteristics (see Wipfel, col. 8, lines 32-51).

36. As per claim 13, Salesky et al., Marshak et al., and Wipfel teach a source device, wherein the cluster manager is further configured to detect a new communication

connection, determine the performance capabilities of the new communication connection, and add the new communication connection to one of the performance clusters based on the performance capabilities of the new communication connection (see Wipfel, col. 2, lines 12-21).

37. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salesky et al., Marshak et al., and Gillett as applied to claims 1 and 2 above, and further in view of Bhola et al. (6,321,252).

38. As per claim 14, Salesky et al., Marshak et al., and Gillett teach the mentioned limitations of claims 1 and 2 above but fail to teach a source device, wherein at least one of the plurality of synchronization mechanisms is further configured to replicate the entire source data buffer on each of the destination devices assigned to the synchronization mechanism performance cluster and then update the destination devices only when data in the source data buffer has changed. However, Bhola et al. teaches a source device, wherein at least one of the plurality of synchronization mechanisms is further configured to replicate the entire source data buffer on each of the destination devices assigned to the synchronization mechanism performance cluster and then update the destination devices only when data in the source data buffer has changed (see Bhola et al., col. 3, lines 21-91). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Salesky et al., Marshak et al., and Gillett to a source device, wherein at least one of the plurality of synchronization mechanisms is further configured to replicate the entire source data

buffer on each of the destination devices assigned to the synchronization mechanism performance cluster and then update the destination devices only when data in the source data buffer has changed in order to provide for coarse-grained temporal synchronization by using separate streams for different media and synchronizing the streams at the client location (see Bhola et al., abstract).

39. As per claims 15 and 16, the above-mentioned motivation of claim 14 applies fully in order to combine Salesky et al., Marshak et al., Gillett, and Bhola et al.

40. As per claim 15, Salesky et al., Gillett, Marshak et al., and Bhola et al. teach a source device, wherein at least one of the plurality of synchronization mechanisms is further configured to replicate the entire source data buffer on each of the destination devices assigned to the synchronization mechanism performance cluster and then update the destination devices only when at least one of such destination devices requests an update (see Bhola et al., col. 4, lines 42-52).

41. As per claim 16, Salesky et al., Gillett, Marshak et al., and Bhola et al. teach a source device, wherein at least one of the plurality of synchronization mechanisms is further configured to replicate the entire source data buffer on each of the destination devices assigned to the synchronization mechanism performance cluster, and wherein each of the plurality of synchronization mechanisms is further configured to update the destination devices interfaced with the synchronization mechanism only when all such destination devices have requested an update (see Bhola et al., col. 10, lines 15-49).

42. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salesky et al. and Marshak et al. as applied to claim 1 above, and further in view of Kremien (20010034752).

43. As per claim 17, Salesky et al. and Marshak et al. teach the mentioned limitations of claim 1 above but fail to teach a source device, wherein the performance similarities for the plurality of communication connections are determined through the steps of: assigning all of the plurality of communication connections to a primary performance cluster; and gathering an average latency for each of the plurality of communication connections. However, Kremien teaches a source device, wherein the performance similarities for the plurality of communication connections are determined through the steps of: assigning all of the plurality of communication connections to a primary performance cluster; and gathering an average latency for each of the plurality of communication connections (see Kremien, paragraph 0064). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Salesky et al. and Marshak et al. to a source device, wherein the performance similarities for the plurality of communication connections are determined through the steps of: assigning all of the plurality of communication connections to a primary performance cluster; and gathering an average latency for each of the plurality of communication connections in order to enable centralized load balancing solution's their decision making by maintaining state information regarding all cluster members in one location (see Kremien, paragraph 0009).

44. As per claim 18, Salesky et al., Marshak et al., and Kremien teach the mentioned limitations of claims 1 and 17 above but Salesky et al. and Marshak et al. fail to teach a source device, wherein the cluster manager is further configured to assign the plurality of communication connections into each of the performance clusters based on the average latency of each of the plurality of communication connections. However, Kremien teaches a source device, wherein the cluster manager is further configured to assign the plurality of communication connections into each of the performance clusters based on the average latency of each of the plurality of communication connections (see Kremien, paragraph 0030). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Salesky et al. and Marshak et al. to a source device, wherein the cluster manager is further configured to assign the plurality of communication connections into each of the performance clusters based on the average latency of each of the plurality of communication connections (see Kremien, paragraph 0024).

45. Claim 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salesky et al., Marshak et al., Wipfel, and Kremien (20010034752) as applied to claims 1, 9, and 17 above, and further in view of Shaw et al. (6,104,392).

46. As per claim 19, Salesky et al., Marshak et al., and Kremien teach the mentioned limitations of claims 1 and 17 above but fail to teach a source device, wherein the plurality of communication connections are assigned into the performance clusters through the steps of: determining time-average latencies for each of the plurality of

communication connections; determining a primary cluster mean latency for the primary performance cluster based on the time-average latencies for each of the plurality of communication connections assigned to the primary cluster; determining the standard deviation of the time-average latencies for each of the plurality of communication connections relative to the primary cluster mean latency; and determining the number of performance clusters required based on the primary cluster mean latency and the standard deviations of the time-average latencies for each of the plurality of communication connections. However, Shaw et al. teaches a source device, wherein the plurality of communication connections are assigned into the performance clusters through the steps of: determining time-average latencies for each of the plurality of communication connections; determining a primary cluster mean latency for the primary performance cluster based on the time-average latencies for each of the plurality of communication connections assigned to the primary cluster; determining the standard deviation of the time-average latencies for each of the plurality of communication connections relative to the primary cluster mean latency; and determining the number of performance clusters required based on the primary cluster mean latency and the standard deviations of the time-average latencies for each of the plurality of communication connections (see Shaw et at. col. 15, line 63-col. 16, line 34). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Salesky et al., Marshak et al., and Kremien to a source device, wherein the plurality of communication connections are assigned into the performance clusters through the steps of: determining time-average latencies for each of the plurality of

communication connections; determining a primary cluster mean latency for the primary performance cluster based on the time-average latencies for each of the plurality of communication connections assigned to the primary cluster; determining the standard deviation of the time-average latencies for each of the plurality of communication connections relative to the primary cluster mean latency; and determining the number of performance clusters required based on the primary cluster mean latency and the standard deviations of the time-average latencies for each of the plurality of communication connections in order to support standard graphics based computer applications connected to clients of varying capability via a network of varying bandwidth and latency by automatically varying the type and number of graphic requests and their networking encoding to provide near optimum performance while maintaining the correct visual representation (see Shaw et al., abstract).

47. As per claim 20, the above-mentioned motivation of claim 19 applies fully in order to combine Salesky et al., Shaw et al., Marshak et al., and Wipfel. Salesky et al., Shaw et al., Marshak et al., and Wipfel teach a source device, wherein the plurality of communication connections are assigned into the performance clusters through further steps of: (a) creating a number of performance clusters; (b) assigning each of the communication connections to one of the performance clusters; (c) calculating the cluster mean latency for each performance cluster based on the time-average latency of each of the connections assigned to the performance cluster; (d) repeating step (c) for all the of the created performance clusters; (e) assigning each communication connection to the performance cluster wherein the cluster mean latency is closest to the

connection time-average latency; and (f) repeating steps (c), (d) and (e) until no change in cluster assignment occurs in step (e) (see Shaw et al., col. 15, lines 10-62).

48. Claim 93 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salesky et al. and Marshak et al. as applied to claim 1 above, and further in view of Vange et al. (2002/0056006). Salesky et al. and Marshak et al. teach the mentioned limitations of claim 1 above but fails to teach a source device, wherein the cluster manager is further configured to determine the number of performance clusters to be created and synchronization mechanisms to be assigned by applying a pre-determined function, the function comprising: a source device resource priority corresponding to the relative importance of minimizing resource usage on the source device; and a destination device service priority corresponding to the relative importance of providing timely updates to the plurality of connected destination devices. However, Vange et al. teaches a source device, wherein the cluster manager is further configured to determine the number of performance clusters to be created and synchronization mechanisms to be assigned by applying a pre-determined function, the function comprising: a source device resource priority corresponding to the relative importance of minimizing resource usage on the source device; and a destination device service priority corresponding to the relative importance of providing timely updates to the plurality of connected destination devices (see Vange et al., ¶ 16-17). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Salesky et al. and Marshak et al. to a source device, wherein the cluster manager is further configured to

determine the number of performance clusters to be created and synchronization mechanisms to be assigned by applying a pre-determined function, the function comprising: a source device resource priority corresponding to the relative importance of minimizing resource usage on the source device; and a destination device service priority corresponding to the relative importance of providing timely updates to the plurality of connected destination devices in order to exchange data over the Internet that provides a high quality of service even during periods of congestion (see Vange et al., ¶ 11).

49. Claim 94 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salesky et al. and Marshak et al. as applied to claims 1 and 93 above, and further in view of Zhang et al. (2005/0015471). Salesky et al. and Marshak et al. teach the mentioned limitations of claims 1 and 93 above but fail to teach a source device, wherein the cluster manager is further configured to determine the number of the performance clusters and synchronization mechanisms by selecting the minimum of: the maximum number corresponding to the resources available on the source device; a number corresponding to a pre-determined percentage of available source device resources; the minimum number that provides timely updates to all of the plurality of destination devices; and a pre-defined limit number. However, Zhang et al. teaches a source device, wherein the cluster manager is further configured to determine the number of the performance clusters and synchronization mechanisms by selecting the minimum of: the maximum number corresponding to the resources available on the source

device; a number corresponding to a pre-determined percentage of available source device resources; the minimum number that provides timely updates to all of the plurality of destination devices; and a pre-defined limit number (see Zhang et al., ¶ 15 and 69). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Salesky et al. and Marshak et al. to a source device, wherein the cluster manager is further configured to determine the number of the performance clusters and synchronization mechanisms by selecting the minimum of: the maximum number corresponding to the resources available on the source device; a number corresponding to a pre-determined percentage of available source device resources; the minimum number that provides timely updates to all of the plurality of destination devices; and a pre-defined limit number in order to securely coordinate and distribute configuration data among a cluster of network servers (see Zhang et al., ¶ 2).

50. Claim 106 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salesky et al. and Rooney as applied to claims 21 and 103-105 above, and further in view of Crichton et al. (2002/0031126). Salesky et al. and Rooney teach the mentioned limitations of claims 21 and 103-105 above but fails to teach a network communication system, wherein both the intermediate synchronization mechanism and the remote synchronization mechanism are configured to provide computations and protocols needed to communicate data over the remote communication connection. However, Crichton et al. teaches a network communication system, wherein both the intermediate synchronization mechanism and the remote synchronization mechanism are configured

to provide computations and protocols needed to communicate data over the remote communication connection (see Crichton et al., ¶ 55). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Salesky et al. to a network communication system, wherein both the intermediate synchronization mechanism and the remote synchronization mechanism are configured to provide computations and protocols needed to communicate data over the remote communication connection in order to enable secure or bit synchronous communication during adverse network conditions, including transiting a congested packet network, that otherwise would cause a loss of bit count integrity (see Crichton et al., ¶ 16).

51. Claim 107 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salesky et al., Rooney, and Crichton et al. as applied to claims 21 and 103-106 above, and further in view of Bhola et al. Salesky et al., Rooney, and Crichton et al. teach the mentioned limitations of claims 21 and 103-106 above but fail to teach a network communication system, wherein the remote synchronization mechanism is further configured to replicate the data in the remote source data buffer on the source data buffer so that the data will be shared with each of the plurality of destination devices via the plurality of synchronization mechanisms of the source device. However, Bhola et al. teaches a network communication system, wherein the remote synchronization mechanism is further configured to replicate the data in the remote source data buffer on the source data buffer so that the data will be shared with each of the plurality of destination devices via the plurality of synchronization mechanisms of the source device

(see Bhola et al., col. 8, line 66-col. 9, line 22). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Salesky et al., Rooney, and Crichton et al. to a network communication system, wherein the remote synchronization mechanism is further configured to replicate the data in the remote source data buffer on the source data buffer so that the data will be shared with each of the plurality of destination devices via the plurality of synchronization mechanisms of the source device in order to provide for coarse-grained temporal synchronization by using separate streams for different media and synchronizing the streams at the client location (see Bhola et al., abstract).

52. Claims 22, 23, 25-41, 44-56, 101, 102, and 108 have similar limitations as to claims 1-3, 5-21, 93-100, 103-107, and 109-112 above; therefore they are being rejected under the same rationale.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ranodhi Serrao whose telephone number is (571)272-7967. The examiner can normally be reached on 8:00-4:30pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571)272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RNS

R.N.S.

08/06/2007

WILLIAM VAUGHN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100